

ABSTRACT OF THE DISCLOSURE

Apparatus and Method to Control Self-Timed and Synchronous Systems

5 An apparatus includes a substrate, a target timing circuit, a leakage timing
circuit, and a control unit. The target timing circuit and the leakage timing circuits
are formed on the substrate. The target timing circuit has a target timing circuit
frequency related to a target frequency. The leakage timing circuit has a leakage
timing circuit frequency related to a leakage current. The control unit maintains a
10 substantially constant ratio between the target timing circuit frequency and the
leakage timing circuit frequency. A method includes generating a first signal related
to a target circuit frequency, generating a second signal related to a leakage current,
and adjusting a control signal applied to a substrate to maintain a substantially
constant frequency ratio between a first signal and the second signal.

"Express Mail" mailing label number: EV370238798US

Date of Deposit: December 31, 2003

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